

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 355 AND HOLIDAY DR./GENSTAR DR. IN FREDERICK COUNTY. THE WORK IS NECESSITATED BY SIDE STREET LANE USE CHANGES. MD 355 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

THE INTERSECTION CURRENTLY OPERATES IN A NEMA SIX-PHASE, FULLY-ACTUATED MODE WITH EXCLUSIVE LEFT TURN PHASES FOR BOTH DIRECTIONS OF MD 355 AND SIDE STREET SPLIT PHASING. A CONCURRENT PEDESTRIAN PHASE CROSSING HOLIDAY DRIVE AND AN ALTERNATE PHASE CROSSING THE SOUTH LEG OF MD 355 EXISTS. THE INTERSECTION WILL NOW OPERATE IN A NEMA EIGHT PHASE FULLY-ACTUATED MODE WITH EXCLUSIVE LEFT TURN PHASES FOR BOTH DIRECTIONS OF MD 355 AND EXCLUSIVE-PERMISSIVE LEFT TURN PHASES FOR HOLIDAY DRIVE AND GENSTAR DRIVE. THE PEDESTRIAN PHASES WILL NOT CHANGE.

THE EXISTING EIGHT-PHASE, FULLY-ACTUATED CONTROLLER HOUSED IN A BASE MOUNTED CABINET WILL BE USED.

A. EQUIPMENT TO BE FURNISHED BY THE SHA AND INSTALLED BY THE CONTRACTOR

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR. ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO THE OFFICE OF TRAFFIC AND SAFETY FOR APPROVAL PRIOR TO INSTALLATION.

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076. THE CONTRACTOR SHALL NOTIFY THE SHA AT (410) 787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.

ALL SIGNAL EQUIPMENT TO BE REMOVED AND NOT RETURNED TO THE SHA SHALL  
BECOME THE PROPERTY OF THE CONTRACTOR.

MR. JOHN CONCANNON  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
(301) 624-8140 / 8141

MRS. SUSAN PALMER  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
(301) 624-8105 / 8106

## CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY

MR. EUGENE BAILEY  
TEAM LEADER SIGN OPERATIONS  
(410) 787-7676

MR. MIKE STOCKER  
SUPPLY OFFICE  
SIGNAL SHOP WAREHOUSE  
(410) 787-7668

A-C	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
D	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
E	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
F-G	EXISTING 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
H	EXISTING 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
I-J	EXISTING 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
K	EXISTING VIDEO DETECTION CABLE
L	EXISTING 12-PAIR VOICE GRADE INTERCONNECT CABLE
M-N	EXISTING MICRO-LOOP PROBE LEAD-IN STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
P	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
EC	EXISTING CABLE
ELW	EXISTING LOOP WIRE

1. THESE PLANS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF ONE YEAR FROM THE DATE OF APPROVAL SHOULD CONSTRUCTION NOT BEGIN WITHIN THIS TIME FRAME THESE PLANS SHALL BE NULL AND VOID WITHOUT A REVIEW FROM THE TRAFFIC ENGINEERING DESIGN DIVISION.
2. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND TRAFFIC SIGNAL EQUIPMENT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THE CONFLICT MAY BE RESOLVED.
3. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCE AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
4. ALL INTERNAL CABINET WIRING IS TO BE PERFORMED BY THE STATE HIGHWAY ADMINISTRATION SIGNAL SHOP.
5. THE CONTRACTOR SHALL REMOVE ALL UNUSED CABLE.
6. INSTALL CONDUIT AND DETECTION PRIOR TO THE INSTALLATION OF THE PAVEMENT MARKINGS.
7. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT BEING REMOVED SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR AT THE LOCATION OF THE WORK.
8. THE LOCATION OF PROPOSED GEOMETRICS MUST BE CONFIRMED PRIOR TO THE INSTALLATION OF SIGNAL EQUIPMENT.
9. PUSHBUTTONS ARE TO BE LOCATED SO THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" X 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
10. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM THE FACE OF THE PUSHBUTTON TO THE FACE OF THE PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
11. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
12. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL, PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E.2 AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATION UNTIL A DESIGN WAIVER IS OBTAINED AND APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
13. ALL APS CENTRAL CONTROL UNITS SHALL BE DELIVERED TO THE SHA SIGNAL SHOP FOR PROGRAMMING AND TESTING PRIOR TO INSTALLATION. CONTACT MR. EDWARD RODENHIZER AT 410-787-7650 TO COORDINATE.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	(R)	(R)	(Y)	(G)	(R)	(R)	(R)	(Y)	(G)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)
PHASE 1 & 5	←G	←G	R	R	←G	←G	←G	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 & 5 CHANGE	←G	←G			←G	←G	←G	R	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 1 & 6	←G	←G	G	G	←R	←R	←R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 CHANGE	←Y	←Y	G	G	←R	←R	←R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 & 5	←R	←R	R	R	←G	←G	←G	G	G	R	R	R	R	R	R	DW	DW	DW	DW
5 CHANGE	←R	←R	R	R	←Y	←Y	←Y	G	G	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 & 6	←R	←R	G	G	←R	←R	←R	G	G	R	R	R	R	R	R	DW	DW	WK	WK
PED CLEAR	←R	←R	G	G	←R	←R	←R	G	G	R	R	R	R	R	R	DW	DW	FL DW	FL DW
2 & 6 CHANGE	←R	←R	Y	Y	←R	←R	←R	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 3 & 7	←G	←G	R	R	←G	←G	←G	R	←G	←G	R	←G	←G	R	R	DW	DW	DW	DW
3 & 7 CHANGE	PHASE 3 & 7 MAY CHANGE TO PHASE 3 & 8, 4 & 7, OR 4 & 8																		
PHASE 3 & 8	←R	←R	R	R	←R	←R	←R	R	R	R	R	←G	←G	G	G	DW	DW	DW	DW
3 CHANGE	←R	←R	R	R	←R	←R	←R	R	R	R	R	←Y	←Y	G	G	DW	DW	DW	DW
PHASE 4 & 7	←R	←R	R	R	←R	←R	←R	R	R	←G	←G	G	R	R	R	DW	DW	DW	DW
7 CHANGE	←R	←R	R	R	←R	←R	←R	R	R	←Y	←Y	G	R	R	R	DW	DW	DW	DW
PHASE 4 & 8	←R	←R	R	R	←R	←R	←R	R	R	G	G	G	G	G	G	DW	DW	DW	DW
4 & 8 CHANGE	←R	←R	R	R	←R	←R	←R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
4 & 8 ALT.	←R	←R	R	R	←R	←R	←R	R	R	G	G	G	G	G	G	WK	WK	DW	DW
PED CLEAR	←R	←R	R	R	←R	←R	←R	R	R	G	G	G	G	G	G	FL DW	FL DW	DW	DW
4 & 8 ALT CHANGE	←R	←R	R	R	←R	←R	←R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	←FLR	←FLR	FLY	FLY	←FLR	←FLR	←FLR	FLY	FLY	FLR	FLR	FLR	FLR	FLR	FLR	DARK	DARK	DARK	DARK

SHA TRACKING NO. 12-AP-FR-000

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 355 (URBANA PIKE) AND  
HOLIDAY DRIVE / GENSTAR DRIVE  
FREDERICK, MARYLAND

SCALE	NONE	DATE	6-10-2013	CONTRACT NO.	BW996M92
DESIGNED BY	T ZAYDEL	COUNTY	FREDERICK		
DRAWN BY	T. ZAYDEL	LOGMILE	10035509.30		
CHECKED BY	K. SCHMID <i>Parish</i>	T.I.M.S. NO.	L873		
F.A.P. NO.	NA	TOD NO.			
DRAWING NO. TS-3737D GI				SHEET NO.	3 OF 3

325 Gambrills Road  
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(410) 923-7101

FAX: (410) 923-6473  
EMAIL: [TRAFFIC@TRAFFIC-CONCEPTS.COM](mailto:TRAFFIC@TRAFFIC-CONCEPTS.COM)

\*PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
LICENSE NO. 42413, EXPIRATION DATE: 6/6/2014

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